SEQUENCE LISTING

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<110> INCYTE PHARMACEUTICALS, INC.
      TANG, Y. Tom
      YUE, Henry
      BAUGHN, Mariah R.
     HILLMAN, Jennifer L.
     LAL, Preeti
     AU-YOUNG, Janice
      YANG, Junming
     LU, Dyung Aina M.
      AZIMZAI, Yalda
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<150> 09/210,083; unassigned; 60/119,365; 60/124,687
<151> 1998-12-11; 1998-12-11; 1999-02-09; 1999-03-16
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Ala Val Phe Val Arg Tyr Asn His Lys Thr Asp Ala Ala Leu Trp
                                     40
His Arg Ser Asn His Ser Asn Ala Asp Asn Glu Phe Tyr Phe Arg
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Tyr Pro Lys Glu Ser His Ser Val Ala Gln Ala Gly Val Gln Arg
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                 65
Arg Asn Leu Gly Ser Leu Gln Pro Ser Pro Pro Arg Trp Ser Phe
                                                         90
                                     85
                 80
Ala Leu Val Ala Gln Ala Gly Val Gln Trp His Asn Leu Gly Ser
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Pro Gln Pro Leu Pro Pro Gly Phe Lys Arg Phe Ser Cys Leu Ser
                                    115
                110
Leu Leu Ser Ser Trp Asp Tyr Ser Leu Glu Ser Val Phe Pro Leu
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Ile Ala Glu Gly Gln Arg Ser Ala Thr Ser Gln Ala Met His Gln
                                    145
                140
Leu Phe Gly Leu Phe Val Thr Leu Met Phe Ala Ser Val Gly Gly
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Gly Leu Gly Gly Leu Leu Leu Lys Leu Pro Phe Leu Asp Ser Pro
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Pro Arg Leu Pro Ala Leu Arg Gly Pro Ser Ser Leu Ala Gly Ala
Trp Arg Ala
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Glu Glu Lys Arg Leu Met Val Glu Leu His Asn Leu Tyr Arg Ala
                                     40
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Gln Val Ser Pro Thr Ala Ser Asp Met Leu His Met Arg Trp Asp
                 50
Glu Glu Leu Ala Ala Phe Ala Lys Ala Tyr Ala Arg Gln Cys Val
                 65
                                     70
Trp Gly His Asn Lys Glu Arg Gly Arg Arg Gly Glu Asn Leu Phe
                                     85
Ala Ile Thr Asp Glu Gly Met Asp Val Pro Leu Ala Met Glu Glu
                                    100
Trp His His Glu Arg Glu His Tyr Asn Leu Ser Ala Ala Thr Cys
                                    115
                110
Ser Pro Gly Gln Met Cys Gly His Tyr Thr Gln Val Val Trp Ala
                                    130
                125
Lys Thr Glu Arg Ile Gly Cys Gly Ser His Phe Cys Glu Lys Leu
                                    145
                140
Gln Gly Val Glu Glu Thr Asn Ile Glu Leu Leu Val Cys Asn Tyr
                                    160
Glu Pro Pro Gly Asn Val Lys Gly Lys Arg Pro Tyr Gln Glu Gly
Thr Pro Cys Ser Gln Cys Pro Ser Gly Tyr His Cys Lys Asn Ser
                                    190
                185
Leu Cys Glu Pro Ile Gly Ser Pro Glu Asp Ala Gln Asp Leu Pro
                                    205
                200
Tyr Leu Val Thr Glu Ala Pro Ser Phe Arg Ala Thr Glu Ala Ser
                                    220
                215
Asp Ser Arg Lys Met Gly Thr Pro Ser Ser Leu Ala Thr Gly Ile
                                    235
Pro Ala Phe Leu Val Thr Glu Val Ser Gly Ser Leu Ala Thr Lys
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245
                                    250
Ala Leu Pro Ala Val Glu Thr Gln Ala Pro Thr Ser Leu Ala Thr
                260
                                    265
Lys Asp Pro Pro Ser Met Ala Thr Glu Ala Pro Pro Cys Val Thr
                                    280
                275
Thr Glu Val Pro Ser Ile Leu Ala Ala His Ser Leu Pro Ser Leu
                290
                                    295
Asp Glu Glu Pro Val Thr Phe Pro Lys Ser Thr His Val Pro Ile
                                    310
                305
Pro Lys Ser Ala Asp Lys Val Thr Asp Lys Thr Lys Val Pro Ser
                                    325
                320
Arg Ser Pro Glu Asn Ser Leu Asp Pro Lys Met Ser Leu Thr Gly
                                    340
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Ala Arg Glu Leu Leu Pro His Ala Glu Glu Glu Ala Glu Ala Glu
                                    355
                350
Ala Glu Leu Pro Pro Ser Ser Glu Val Leu Ala Ser Val Phe Pro
                                    370
Ala Gln Asp Lys Pro Gly Glu Leu Gln Ala Thr Leu Asp His Thr
                                    385
Gly His Thr Ser Ser Lys Ser Leu Pro Asn Phe Pro Asn Thr Ser
                395
                                    400
Ala Thr Ala Asn Ala Thr Gly Gly Arg Ala Leu Ala Leu Gln Ser
                                    415
Ser Leu Pro Gly Ala Glu Gly Pro Asp Lys Pro Ser Val Val Ser
                                    430
                425
Gly Leu Asn Ser Gly Pro Gly His Val Trp Gly Pro Leu Leu Gly
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Leu Leu Leu Pro Pro Leu Val Leu Ala Gly Ile Phe
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Val Ala Leu Phe Thr Phe Cys Asp Pro Val Lys Asp Tyr Val Gln
                                    130
                125
Ala Asn Pro Gly Trp Tyr Trp Ala Ser Tyr Ala Val Phe Phe Ala
                                    145
                140
Thr Tyr Leu Thr Leu Ala Cys Cys Ser Gly Pro Arg Arg His Phe
                                    160
                155
Pro Trp Asn Leu Ile Leu Leu Thr Val Phe Thr Leu Ser Met Ala
                                    175
                170
Tyr Leu Thr Gly Met Leu Ser Ser Tyr Tyr Asn Thr Thr Ser Val
                                    190
                185
Leu Leu Cys Leu Gly Ile Thr Ala Leu Val Cys Leu Ser Val Thr
                200
                                    205
Val Phe Ser Phe Gln Thr Lys Phe Asp Phe Thr Ser Cys Gln Gly
                215
Val Leu Phe Val Leu Leu Met Thr Leu Phe Phe Ser Gly Leu Ile
Leu Ala Ile Leu Leu Pro Phe Gln Tyr Val Pro Trp Leu His Ala
                245
                                    250
Val Tyr Ala Ala Leu Gly Ala Gly Val Phe Thr Leu Phe Leu Ala
                                    265
                260
Leu Asp Thr Gln Leu Leu Met Gly Asn Arg Arg His Ser Leu Ser
                                    280
                275
Pro Glu Glu Tyr Ile Phe Gly Ala Leu Asn Ile Tyr Leu Asp Ile
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Ile Tyr Ile Phe Thr Phe Phe Leu Gln Leu Phe Gly Thr Asn Arg
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Glu
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Gly Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys
Ser Glu Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg
Leu Glu Ala Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala
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Gly Lys Gly Lys Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser
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Ser Ala Arg Pro Gly Gly Glu Ser Leu Gln Gly Gln Thr Leu
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                                     25
Cys Ala Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val
                                     40
                 35
Gln Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg
                                     55
Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg
                 65
Ser Pro Gly Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro
                                     85
Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala
                                    100
Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro
                                    115
                110
Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln
                                    130
                125
Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln
                                    145
                140
Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu
                                    160
                155
Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys Gly
                                    175
                170
Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala
                                    190
                185
Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu
                                    205
                200
Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala
                                    220
                215
Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu
                                    235
                230
Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu
                                     250
                245
Gln Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys
                                                         270
                                    265
                260
Lys Asp Ser
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Arg Val Glu Val Ser Gly Asp Ala Ser Cys Cys Ser Pro Asp Pro
                 35
                                     40
Ile Ser Pro Glu Asp Leu Pro Arg Gln Val Glu Leu Leu Asp Ala
                                     55
Val Ser Gln Ala Ala Gln Lys Tyr Glu Ala Leu Tyr Met Gly Thr
Leu Pro Val Thr Lys Ala Met Gly Met Asp Val Leu Asn Glu Ala
                                     85
Ile Gly Thr Leu Thr Ala Arg Gly Asp Arg Asn Ala Trp Val Pro
                                    100
                 95
Thr Met Leu Ser Val Ser Asp Ser Leu Met Thr Ala His Pro Ile
                                    115
                110
Gln Ala Glu Ala Ser Thr Glu Glu Glu Pro Leu Trp Gln Cys Pro
                                    130
Val Arg Leu Val Thr Phe Ile Gly Val Gly Arg Asp Pro His Thr
                                    145
                140
Phe Gly Leu Ile Ala Asp Leu Gly Arg Gln Ser Phe Gln Cys Ala
                                    160
                155
Ala Phe Trp Cys Gln Pro His Ala Gly Gly Leu Ser Glu Ala Val
                170
                                    175
Gln Ala Ala Cys Met Val Gln Tyr Gln Lys Cys Leu Val Ala Ser
                                    190
                185
Ala Ala Arg Gly Lys Ala Trp Gly Ala Gln Ala Arg Ala Arg Leu
                                    205
                200
Arg Leu Lys Arg Thr Ser Ser Met Asp Ser Pro Gly Gly Pro Leu
                215
Pro Leu Pro Leu Leu Lys Gly Gly Val Gly Gly Ala Gly Ala Thr
                                    235
                230
Pro Arg Lys Arg Gly Val Phe Ser Phe Leu Asp Ala Phe Arg Leu
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                                    250
Lys Pro Ser Leu Leu His Met Pro
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Arg Ala Leu Glu Glu Gln Leu Leu Lys Tyr Ser Pro Asp Pro Val
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Val Val Arg Gly Ser Gly His Val Thr Val Phe Gly Leu Ser Asn
                                     40
                 35
Lys Phe Glu Ser Glu Phe Pro Ser Ser Leu Thr Gly Lys Val Ala
                                     55
                 50
Pro Glu Glu Phe Lys Ala Ser Ile Asn Arg Val Asn Ser Cys Leu
                                     70
                 65
Lys Lys Asn Leu Pro Val Asn Val Arg Trp Leu Leu Cys Gly Cys
                 80
Leu Cys Cys Cys Cys Thr Leu Gly Cys Ser Met Trp Pro Val Ile
                 95
                                    100
Cys Leu Ser Lys Arg Thr Arg Arg Ser Ile Glu Lys Leu Leu Glu
                                    115
                110
Trp Glu Asn Asn Arg Leu Tyr His Lys Leu Cys Leu His Trp Arg
                                    130
Leu Ser Lys Arg Lys Cys Glu Thr Asn Asn Met Met Glu Tyr Val
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Ile Leu Ile Glu Phe Leu Pro Lys Thr Pro Ile Phe Arg Pro Asp
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Gly Tyr Asn Ala Pro His His Pro Phe Ala Gly Tyr Pro Pro Gly
Tyr Pro Met Gln Ala Tyr Val Asp Pro Ser Asn Pro Asn Ala Gly
                 35
Lys Val Leu Leu Pro Thr Pro Ser Met Asp Pro Val Cys Ser Pro
                                     55
                 50
Ala Pro Tyr Asp His Ala Gln Pro Leu Val Gly His Ser Thr Glu
                                      70
Pro Leu Ser Ala Pro Pro Pro Val Pro Val Pro His Val Ala
                                      85
                 80
Ala Pro Val Glu Val Ser Ser Ser Gln Tyr Val Ala Gln Ser Asp
Gly Val Val His Gln Asp Ser Ser Val Ala Val Leu Pro Val Pro
                110
Ala Pro Gly Pro Val Gln Gly Gln Asn Tyr Ser Val Trp Asp Ser
                                     130
                125
Asn Gln Gln Ser Val Ser Val Gln Gln Tyr Ser Pro Ala Gln
                                     145
                140
Ser Gln Ala Thr Ile Tyr Tyr Gln Gly Gln Thr Cys Pro Thr Val
                                     160
Tyr Gly Val Thr Ser Pro Tyr Ser Gln Thr Thr Pro Pro Ile Val
                                     175
                170
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Gln Ser Tyr Ala Gln Pro Ser Leu Gln Tyr Ile Gln Gly Gln Gln
                                    190
                185
Ile Phe Thr Ala His Pro Gln Gly Val Val Gln Pro Ala Ala
                                    205
                200
Ala Val Thr Thr Ile Val Ala Pro Gly Gln Pro Gln Pro Leu Gln
                                    220
                215
Pro Ser Glu Met Val Val Thr Asn Asn Leu Leu Asp Leu Pro Pro
                                    235
                230
Pro Ser Pro Pro Lys Pro Lys Thr Ile Val Leu Pro Pro Asn Trp
                                    250
Lys Thr Ala Arg Asp Pro Glu Gly Lys Ile Tyr Tyr His Val
                                    265
                260
Ile Thr Arg Gln Thr Gln Trp Asp Pro Pro Thr Trp Glu Ser Pro
                                    280
                275
Gly Asp Asp Ala Ser Leu Glu His Glu Ala Glu Met Asp Leu Gly
                                                         300
                                    295
                290
Thr Pro Thr Tyr Asp Glu Asn Pro Met Lys Ala Ser Lys Lys Pro
                                    310
                305
Lys Thr Ala Glu Ala Asp Thr Ser Ser Glu Leu Ala Lys Lys Ser
                                    325
                320
Lys Glu Val Phe Arg Lys Glu Met Ser Gln Phe Ile Val Gln Cys
                                    340
                335
Leu Asn Pro Tyr Arg Lys Pro Asp Cys Lys Val Gly Arg Ile Thr
                                    355
                350
Thr Thr Glu Asp Phe Lys His Leu Ala Arg Lys Leu Thr His Gly
                                    370
Val Met Asn Lys Glu Leu Lys Tyr Cys Lys Asn Pro Glu Asp Leu
                                    385
                380
Glu Cys Asn Glu Asn Val Lys His Lys Thr Lys Glu Tyr Ile Lys
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Lys Tyr Met Gln Lys Phe Gly Ala Val Tyr Lys Pro Lys Glu Asp
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Thr Glu Leu Glu
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Ala Leu Arg Pro Leu Leu Leu Leu Pro Leu Val Leu Leu Pro Pro
                                    25
Leu Ala Ala Ala Ala Gly Pro Asn Arg Cys Asp Thr Ile Tyr
                                     40
Gln Gly Phe Ala Glu Cys Leu Ile Arg Leu Gly Asp Ser Met Gly
                                     55
Arg Gly Glu Leu Glu Thr Ile Cys Arg Ser Trp Asn Asp Phe
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70
                 65
His Ala Cys Ala Ser Gln Val Leu Ser Gly Cys Pro Glu Glu Ala
                                     85
                 80
Ala Ala Val Trp Glu Ser Leu Gln Gln Glu Ala Arg Gln Ala Pro
                                   100
                 95
Arg Pro Asn Asn Leu His Thr Leu Cys Gly Ala Pro Val His Val
                                    115
                110
Arg Glu Arg Gly Thr Gly Ser Lys Thr Asn Gln Glu Thr Leu Arg
                                    130
Ala Thr Ala Pro Ala Leu Pro Met Ala Pro Ala Pro Pro Leu Leu
                                    145
Ala Ala Leu Ala Leu Ala Tyr Leu Leu Arg Pro Leu Ala
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His Phe Asp Tyr Pro Arg Leu Ser Gln Gly Phe Leu Leu Asp Tyr
                                      40
                  35
Phe Leu Met Ser Leu Leu Cys Ser Lys Leu Trp Asp Leu Leu Tyr
                                      55
                  50
Lys Leu Arg Phe Val Leu Thr Tyr Ile Ala Pro Trp Gln Ile Thr
                                      70
Trp Gly Ser Ala Phe His Ala Phe Ala Gln Pro Phe Ala Val Pro
                                      85
His Ser Ala Met Leu Phe Val Gln Ala Leu Leu Ser Gly Leu Phe
                                     100
                  95
Ser Thr Pro Leu Asn Pro Leu Leu Gly Ser Ala Val Phe Ile Met
                                     115
                 110
Ser Tyr Ala Arg Pro Leu Lys Phe Trp Glu Arg Asp Tyr Asn Thr
                                     130
                 125
Lys Arg Val Asp His Ser Asn Thr Arg Leu Val Thr Gln Leu Asp
                                     145
                 140
Arg Asn Pro Gly Ala Asp Asp Asn Asn Leu Asn Ser Ile Phe Tyr
                                     160
                 155
Glu His Leu Thr Arg Ser Leu Gln His Thr Leu Cys Gly Asp Leu
                                     175
                 170
Val Leu Gly Arg Trp Gly Asn Tyr Gly Pro Gly Asp Cys Phe Val
                                     190
                 185
Leu Ala Ser Asp Tyr Leu Asn Ala Leu Val His Leu Ile Glu Val
                                     205
                 200
Gly Asn Gly Leu Val Thr Phe Gln Leu Arg Gly Leu Glu Phe Arg
                                     220
                 215
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Gly	Thr	Tyr	Cys	Gln 230	Gln	Arg	Glu	Val	Glu 235	Ala	Ile	Thr	Glu	Gly 240
Val	Glu	Glu	Asp		Gly	Cys	Cys	Cys	Cys 250	Glu	Pro	Gly	His	Leu 255
Pro	Arg	Val	Leu		Phe	Asn	Ala	Ala	Phe 265	Gly	Gln	Arg	Trp	Leu 270
Ala	Trp	Glu	Val	Thr 275	Ala	Ser	Lys	Tyr	Val 280	Leu	Glu	Gly	Tyr	Ser 285
				290					295				Asp	Leu 300
				305	Thr				310					Tyr 315
				320					325				Glu	330
				335					340				Ala	345
				350					355				Asp	360
				365					370				His	375
				380					385				Val	390
				395					400				Leu	405
				410					415				Met Phe	420
				425					430				Phe	435
				440					445				Arg	450
				455					460					465 Tyr
				470					475					480 Glu
				485					490					495 Ala
				500					505					510 Leu
				515					520					Arg
				530					535					Arg
				545					550 Leu	Val				Asn
Arg	Asn	Pro	Glu		Gly	Ser	Ile	Gln	565 Asn	Ala	Lys	Gln	Ala	570 Leu 585
Arg	Asn	Met	. Ile		Ser	Ser	Cys	Asp		Pro	Leu	Gly	туг	503 Pro 600
Ile	Tyr	· Val	Ser		Leu	Thr	Thr	Ser		Ala	Gly	Ser	His	Pro 615
Gln	Leu	. Arg	Ala		Trp	Gly	Gly	Pro	610 Ile 625	Ser	Leu	Gly	Ala	Ile 630
Ala	His	Trp	Leu	620 Leu	ı Arg	Thr	Trp	Glu			His	Lys	Gly	Cys

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Gly Ala Gly Cys Asn Ser Gly Gly Asn Val Asp Asp Ser Asp Cys
               650
                                    655
Ser Gly Gly Gly Leu Thr Ser Leu Ser Asn Asn Pro Pro Val
                                    670
                665
Ala His Pro Thr Pro Glu Asn Thr Ala Gly Asn Gly Asp Gln Pro
                                    685
                680
Leu Pro Pro Gly Pro Gly Trp Gly Pro Arg Ser Ser Leu Ser Gly
                                    700
                695
Ser Gly Asp Gly Arg Pro Pro Pro Leu Leu Gln Trp Pro Pro Pro
                                    715
                710
Arg Leu Pro Gly Pro Pro Pro Ala Ser Pro Ile Pro Thr Glu Gly
                                    730
                725
Pro Arg Thr Ser Arg Pro Pro Gly Pro Gly Leu Leu Ser Ser Glu
                                    745
                740
Gly Pro Ser Gly Lys Trp Ser Leu Gly Gly Arg Lys Gly Leu Gly
                                    760
                755
Gly Ser Asp Gly Glu Pro Ala Ser Gly Ser Pro Lys Gly Gly Thr
                                    775
                770
Pro Lys Ser Gln Val Arg His Leu Trp Glu Gly Trp Val Pro Glu
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                785
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Gly
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Ile His Val Arg Glu Leu Leu Asp Leu His Lys Gln Pro Thr Ser
                                     40
                 35
Glu Ala Asn Cys Ser Ala Met Phe Gly Lys Leu Met Thr Ile Ala
                 50
Lys Asn Leu Pro Asp Pro Gly Lys Ala Gln Asp Phe Val Lys
                                     70
Phe Asn Gln Val Leu Gly Asp Asp Glu Lys Leu Arg Ser Gln Leu
                                     85
Glu Leu Leu Ile Ser Pro Thr Cys Ser Cys Lys Gln Ala Asp Ile
                                    100
                 95
Cys Val Arg Glu Ile Ala Arg Lys Leu Ala Asn Pro Lys Gln Pro
                                    115
                110
Thr Asn Pro Phe Leu Glu Met Val Lys Phe Leu Leu Glu Arg Ile
                                    130
                125
Ala Pro Val His Ile Asp Ser Glu Ala Ile Ser Ala Leu Val Lys
```

145

140

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Leu	Met	Asn	Lys	Ser 155	Ile	Glu	Gly	Thr	Ala 160	Asp	Asp	Glu	Glu	Glu 165
Gly	Val	Ser	Pro	Asp 170	Thr	Ala	Ile	Arg	Ser 175	Gly	Leu	Glu	Leu	Leu 180
Lys	Val	Leu	Ser	Phe	Thr	His	Pro	Thr		Phe	His	Ser	Ala	Glu 195
Thr	Tyr	Glu	Ser		Leu	Gln	Cys	Leu	Arg	Met	Glu	Asp	Asp	Lys
Val	Ala	Glu	Ala	200 Ala	Ile	Gln	Ile	Phe	205 Arg	Asn	Thr	Gly	His	210 Lys
				215					220				Pro	225
				230					235					240
				245					250				Lys	255
Ala	Val	His	Cys	Ile 260	His	Ala	Ile	Phe	Thr 265	Asn	Lys	Glu	Val	GIn 270
Leu	Ala	Gln	Ile	Phe 275	Glu	Pro	Leu	Ser	Arg 280	Ser	Leu	Asn	Ala	Asp 285
Val	Pro	Glu	Gln		Ile	Thr	Pro	Leu	Val 295	Ser	Leu	Gly	His	Ile 300
Ser	Met	Leu	Ala	Pro	Asp	Gln	Phe	Ala	ser	Pro	Met	Lys	ser	Val
Val	Ala	Asn	Phe	305 Ile	Val	Lys	Asp	Leu	310 Leu	Met	Asn	Asp	Arg	315 Ser
				320					325				Glu	330
				335					340					345
				350					355				Leu	360
				365					370				Ala	375
ser	Thr	Leu	Arg	Leu 380	Leu	Ser	Ala	Met	Leu 385	Val	Ser	Glu	Gly	Asp 390
Leu	Thr	Glu	Gln		Arg	Ile	Ser	Lys	Ser 400	Asp	Met	Ser	Arg	Leu 405
Arg	Leu	Ala	Ala	Gly	Ser	Ala	Ile	Met		Leu	Ala	Gln	Glu	Pro 420
Cys	Tyr	His	Glu	410 Ile	Ile	Thr	Pro	Glu		Phe	Gln	Leu	Cys	Ala
Leu	Val	Ile	Asn	425 Asp	Glu	Cys	Tyr	Gln	430 Val	Arg	Gln	Ile	Phe	435 Ala
				440					445				Leu	450
				455					460					465
-				470					475				Lys	480
				485					490				Ser	495
Arg	Arg	Glu	Tyr	Ile 500	Lys	Gln	Asn	Pro	Met 505	Ala	Thr	Glu	Lys	Leu 510
Leu	Ser	Leu	Leu	Pro	Glu	Tyr	Val	Val		Tyr	Met	Ile	His	Leu 525
Leu	Ala	His	Asp		Asp	Phe	Thr	Arg	Ser	Gln	Asp	Val	Asp	Gln
Leu	Arg	Asp	Ile	530 Lys	Glu	Cys	Leu	Trp		Met	Leu	Glu	Val	540 Leu
Met	Thr	Lys	Asn	545 G l u	Asn	Asn	Ser	His	550 Ala	Phe	Met	Lys	Lys	555 Met
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565

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Ala Glu Asn Ile Lys Leu Thr Arg Asp Ala Gln Ser Pro Asp Glu
                                    580
                575
Ser Lys Thr Asn Glu Lys Leu Tyr Thr Val Cys Asp Val Ala Leu
                                    595
                590
Cys Val Ile Asn Ser Lys Ser Ala Leu Cys Asn Ala Asp Ser Pro
                605
Lys Asp Pro Val Leu Pro Met Lys Phe Phe Thr Gln Pro Glu Lys
                620
Asp Phe Cys Asn Asp Lys Ser Tyr Ile Ser Glu Glu Thr Arg Val
                635
Leu Leu Leu Thr Gly Lys Pro Lys Pro Ala Gly Val Leu Gly Ala
                                    655
                650
Val Asn Lys Pro Leu Ser Ala Thr Gly Arg Lys Pro Tyr Val Arg
                                    670
                665
Ser Thr Gly Thr Glu Thr Gly Ser Asn Ile Asn Val Asn Ser Glu
                                     685
                680
Leu Asn Pro Ser Thr Gly Asn Arg Ser Arg Glu Gln Ser Ser Glu
                                    700
                695
Ala Ala Glu Thr Gly Val Ser Glu Asn Glu Glu Asn Pro Val Arg
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                710
Ile Ile Ser Val Thr Pro Val Lys Asn Ile Asp Pro Val Lys Asn
                                     730
                725
Lys Glu Ile Asn Ser Asp Gln Ala Thr Gln Gly Asn Ile Ser Ser
                                     745
                740
Asp Arg Gly Lys Lys Arg Thr Val Thr Ala Ala Gly Ala Glu Asn
                755
Ile Gln Gln Lys Thr Asp Glu Lys Val Asp Glu Ser Gly Pro Pro
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                770
Ala Pro Ser Lys Pro Arg Arg Gly Arg Arg Pro Lys Ser Glu Ser
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                785
Gln Gly Asn Ala Thr Lys Asn Asp Asp Leu Asn Lys Pro Ile Asn
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                                     805
Lys Gly Arg Lys Arg Ala Ala Val Gly Gln Glu Ser Pro Gly Gly
Leu Glu Ala Gly Asn Ala Lys Ala Pro Lys Leu Gln Asp Leu Ala
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Lys Lys Ala Ala Pro Ala Glu Arg Gln Ile Asp Leu Gln Arg
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Ala	Ile	Arg	Lys		Gly	Asn	Pro	Val	Val 55	Phe	Met	Val	Gln	Ser 60
Ile	Ile	Asn	Arg	Pro 65	Arg	Ala	Pro	Ser	Gln 70	Ser	Glu	Ser	Glu	Pro 75
	_		Pro	80					85					90
			Met	95					100					105
			Asp	110					115					Trp 120
			Arg	125					130					135
			Leu	140					145					150
			Lys	155					160					165
	_		Asn	170					175					180
			Leu	185					190					195
			Asn	200					205					210
	_		Ile Pro	215					220					225
			Gln	230					235					240
			Val	245					250					255
_			Lys	260					265					270
			Lys	275					280					285
	_		Ala	290					295					300
_			Asp	305					310					315
			Leu	320					325					330
			Glu	335					340					345
			Ser	350					355					360
-			Ser	365					370					375
			Ser	380					385					390
			Ile	395					400					405
-			Gly	410					415					420
_	_		Gly	425					430					435
ьeu	ьeu	сту	АТА	тте	тте	TTG	11TS	GIU	val	- y -	Jiu	ψ±u	J- y	

				440					445					450
Δla	CVS	Lvs	Asp	440 Glv	Ara	Leu	Trp	Ala		Asp	Gln	Ile	Leu	
AIG	Cyb	_, _		455	5		1		460	-				465
Val	Asn	Gly	Ile	Asp	Leu	Arg	Lys	Ala	Thr	His	Asp	Glu	Ala	
				470					475			_		480
Asn	Val	Leu	Arg		Thr	Pro	Gln	Arg		Arg	Leu	Thr	Leu	
			_	485		_		~3	490	**- 1	O	N	mh w	495
Arg	Asp	GIu	Ala		Tyr	гàг	GIU	GIU	505	vaı	Cys	Asp	Thr	510
Thr	Tla	Glu	T11	500	Laze	Lve	Pro	Glv		Glv	Leu	Glv	Leu	
1111	116	GIU	пец	515	цуз	Lys	110	O ₁	520	1		1		525
Ile	Val	Gly	Lys	Arg	Asn	Asp	Thr	Gly	Val	Phe	Val	Ser	Asp	Ile
		_		530					535					540
Val	Lys	Gly	Gly	Ile	Ala	Asp	Ala	Asp	Gly	Arg	Leu	Met	Gln	
				545					5 5 0		_	_		555
Asp	Gln	Ile	Leu		Val	Asn	Gly	Glu		Val	Arg	Asn	Ala	570
a1	a3	חות	17-1	560	772	T. 211	T.011	Lare	565	Ser	T.eu	Glv	Thr	
GIN	GIU	Ala	vaı	575	Ala	пеп	пец	цуз	580	Jei	пси	OI y		585
Thr	Leu	Glu	Val		Arq	Ile	Lys	Ala		Pro	Phe	His	Ser	Glu
				590			•		595					600
Arg	Arg	Pro	Ser	Gln	Ser	Ser	Gln	Val	Ser	Glu	Gly	Ser	Leu	
				605					610					615
Ser	Phe	Thr	Phe		Leu	Ser	Gly	Ser		Thr	Ser	Glu	Ser	
~ 3		0	0	620	T	7	71-	Ton	625	Car	Glu	Tla	Gln	630
GIu	Ser	ser	ser	635	гуѕ	ASII	Ala	цец	640	261	GIU	116	Gln	645
T.e.u	Ara	Thr	Val		Met	Lvs	Lvs	Glv		Thr	Asp	Ser	Leu	
LCu	**** 9			650		_1 _	- 4	1	655		_			660
Ile	Ser	Ile	Ala	Gly	Gly	Val	Gly	Ser	Pro	Leu	Gly	Asp	Val	
				665					670		_	_ =	~-3	675
Ile	Phe	Ile	Ala		Met	His	Pro	Thr		Val	Ala	Ala	Gln	Thr 690
Q1	7	T	7	680	C1	7 cm	7 ~~	Tla	685 Val	Thr	Tle	Cvs	Gly	
GIN	гÀг	Leu	Arg	695	GIY	ASP	Arg	116	700	1111	110	Cyb	OT I	705
Ser	Thr	Glu	Glv		Thr	His	Thr	Gln		Val	Asn	Leu	Leu	Lys
501			1	710					715					720
Asn	Ala	Ser	Gly	Ser	Ile	Glu	Met	Gln	Val	Val	Ala	Gly	Gly	
				725					730		_	_		735
Val	Ser	Val	Val		Gly	His	Gln	Gln		Pro	Ala	ser	Ser	
		nl	mb	740	T	mb se	Cox	Cor	745	Tlo	Dha	Gln	λen	750
Leu	Ser	Pne	Thr	755	Leu	1111	ser	ser	760	116	FIIC	GIII	Asp	765
T.eu	Glv	Pro	Pro		Cvs	Lvs	Ser	Ile		Leu	Glu	Arq	Gly	
Dou	OL y	110		770	O _I Z	-1-			775			_	Ī	780
Asp	Gly	Leu	Gly	Phe	Ser	Ile	Val	Gly	Gly	Tyr	Gly	Ser	Pro	His
				785					790					795
Gly	Asp	Leu	Pro		Tyr	Val	Lys	Thr		Phe	Ala	Lys	Gly	
			_	800	_	.	•	7	805	7	01-	T1 ~	T 1 ^	810
Ala	Ser	Glu	Asp	GLY 815	Arg	ьeu	гуѕ	arg	820	Asp	GIII	TTG	Ile	825
V21	Δen	Glv	Gln		Len	Glu	Glv	Val		His	Glu	Glu	Ala	
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Phe Gly Phe Leu Tyr Arg Lys Thr Asp Phe Tyr Arg Leu Leu Arg
                                     40
                 35
His Pro Ser Asp Arg Met Gly Phe Pro Pro Gly Ala Ala Gln Ala
                                     55
                 50
Leu Val Leu Gln Val Phe Lys Thr Phe Asp His Met Ala Arg Gln
                                     70
Asp Asp Glu Lys Arg Arg Gln Glu Leu Glu Glu Lys Ile Arg Arg
                                     85
Lys Glu Glu Glu Ala Lys Thr Val Ser Ala Ala Ala Glu
                                     100
                 95
Lys Glu Pro Val Pro Val Gln Glu Ile Glu Ile Asp Ser
                                    115
                110
Thr Thr Glu Leu Asp Gly His Gln Glu Val Glu Lys Val Gln Pro
                                     130
                125
Pro Gly Pro Val Lys Glu Met Ala His Gly Ser Gln Glu Ala Glu
                                     145
Ala Pro Gly Ala Val Ala Gly Ala Ala Glu Val Pro Arg Glu Pro
                                     160
                155
 Pro Ile Leu Pro Arg Ile Gln Glu Gln Phe Gln Lys Asn Pro Asp
                                     175
                170
 Ser Tyr Asn Gly Ala Val Arg Glu Asn Tyr Thr Trp Ser Gln Asp
                                    190
                185
 Tyr Thr Asp Leu Glu Val Arg Val Pro Val Pro Lys His Val Val
                                     205
                 200
 Lys Gly Lys Gln Val Ser Val Ala Leu Ser Ser Ser Ile Arg
                                     220
 Val Ala Met Leu Glu Glu Asn Gly Glu Arg Val Leu Met Glu Gly
                                     235
                 230
 Lys Leu Thr His Lys Ile Asn Thr Glu Ser Ser Leu Trp Ser Leu
                                     250
                 245
 Glu Pro Gly Lys Cys Val Leu Val Asn Leu Ser Lys Val Gly Glu
                                     265
                 260
 Tyr Trp Trp Asn Ala Ile Leu Glu Gly Glu Glu Pro Ile Asp Ile
                                     280
 Asp Lys Ile Asn Lys Glu Arg Ser Met Ala Thr Val Asp Glu Glu
                                                         300
                                     295
                 290
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Glu Gln Ala Val Leu Asp Arg Leu Thr Phe Asp Tyr His Gln Lys
                                     310
                305
Leu Gln Gly Lys Pro Gln Ser His Glu Leu Lys Val His Glu Met
                                    325
                320
Leu Lys Lys Gly Trp Asp Ala Glu Gly Ser Pro Phe Arg Gly Gln
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                335
Arg Phe Asp Pro Ala Met Phe Asn Ile Ser Pro Gly Ala Val Gln
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                350
Phe
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Arg Arg Ser Gln Asp Gly Cys Pro Asp Gly Cys Ala Ser Leu Thr
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Ala Thr Ala Pro Ser Pro Glu Val Ser Ala Ala Ala Thr Ile Ser
                                      70
                 65
Leu Met Thr Asp Glu Pro Gly Leu Asp Asn Pro Ala Tyr Val Ser
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Ser Ala Glu Asp Gly Gln Pro Ala Ile Ser Pro Val Asp Ser Gly
                                     100
Arg Ser Asn Arg Thr Arg Ala Arg Pro Phe Glu Arg Ser Thr Ile
                                     115
Arg Ser Arg Ser Phe Lys Lys Ile Asn Arg Ala Leu Ser Val Leu
                                     130
                125
Arg Arg Thr Lys Ser Gly Ser Ala Val Ala Asn His Ala Asp Gln
                                     145
                 140
Gly Arg Glu Asn Ser Glu Asn Ile Thr Ala Pro Glu Val Phe Pro
                                     160
                 155
Arg Leu Tyr His Leu Ile Pro Asp Gly Glu Ile Thr Ser Ile Lys
                                     175
                 170
Ile Asn Arg Val Asp Pro Ser Glu Ser Leu Ser Ile Arg Leu Val
                                     190
Gly Gly Ser Glu Thr Pro Leu Val His Ile Ile Ile Gln His Ile
                                     205
                 200
Tyr Arg Asp Gly Val Ile Ala Arg Asp Gly Arg Leu Leu Pro Gly
                                     220
                 215
Asp Ile Ile Leu Lys Val Asn Gly Met Asp Ile Ser Asn Val Pro
                                     235
                 230
His Asn Tyr Ala Val Arg Leu Leu Arg Gln Pro Cys Gln Val Leu
                                     250
                 245
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Trp	Leu	Thr	Val		Arg	Glu	Gln	Lys	Phe 265	Arg	Ser	Arg	Asn	Asn 270
Gly	Gln	Ala	Pro	260 Asp	Ala	Tyr	Arg	Pro		Asp	Asp	Ser	Phe	His
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Val	Ile	Leu	Asn	Lys 290	Ser	Ser	Pro	Glu	Glu 295	Gln	Leu	Gly	Ile	Lys 300
	_		_		_	~ 3	.	G1		Db.o	T10	Dho	Acn	T/2 1
				305					310				Asn	315
Leu	Asp	Gly	Gly	Val	Ala	Tyr	Arg	His	Gly	Gln	Leu	Glu	Glu	Asn
				320					325					330
Asp	Arq	Val	Leu	Ala	Ile	Asn	Gly	His	Asp	Leu	Arg	Tyr	Gly	Ser
_				335					340					345
Pro	Glu	Ser	Ala	Ala	His	Leu	Ile	Gln	Ala	Ser	Glu	Arg	Arg	Val
				350					355					360
His	Leu	Val	Val	Ser	Arg	Gln	Val	Arg	Gln	Arg	Ser	Pro	Asp	Ile
				365					370					375
Phe	Gln	Glu	Ala	Gly	Trp	Asn	Ser	Asn	Gly	Ser	Trp	Ser	Pro	Gly
2220				380	•				385					390
Pro	Glv	Glu	Arg	Ser	Asn	Thr	Pro	Lys	Pro	Leu	His	Pro	Thr	Ile
110	0 -1		5	395				-	400					405
Thr	Cve	His	Glu		Val	Val	Asn	Ile	Gln	Lys	Asp	Pro	Gly	Glu
1111	Cys	1120	01 4	410					415	1	-		_	420
Sor	T.011	Glv	Met		Val	Ala	Glv	Glv	Ala	Ser	His	Arq	Glu	Trp
261	пец	Gry		425			U -1	1	430					435
Λαπ	T OU	Dro	Tle		Va1	Tle	Ser	Val		Pro	Glv	Gly	Val	Ile
ASD	neu	FIO	116	440	V41		00-		445			•		450
502	7. ~~	Λen	Glv		Tle	Lvs	Thr	Glv		Ile	Leu	Leu	Asn	Val
Ser	Arg	ASD	Ory	455	110	 ,		1	460					465
7 cm	Gly	W=1	Glu		Thr	Glu	Val	Ser		Ser	Glu	Ala	Val	Ala
ASP	GIY	VAI	Olu	470		0-u	,		475					480
T ON	Tau	Laze	Δνα		Ser	Ser	Ser	Ile		Leu	Lvs	Ala	Leu	Glu
Leu	пеп	цуз	AT 9	485	001	501	001		490		-			495
7727	Luc	Glu	Tvr		Pro	Gln	Glu	Asp		Ser	Ser	Pro	Ala	Ala
Vai	шуз	O1u	- 1 -	500				1-	505					510
T OU	λcn	Sar	Δen		Asn	Met	Ala	Pro		Ser	Asp	Trp	Ser	Pro
пеп	MSD	JCI	Abii	515					520		-	-		525
50*	Trn	t/a1	Met		T.eu	Glu	Leu	Pro		Cvs	Leu	Tyr	Asn	Cys
Ser	пр	vai	Mec	530		024			535	- 1		•		540
Tarc	λαπ	Tle	Val		Ara	Ara	Asn	Thr		Glv	Ser	Leu	Gly	Phe
цур	Asp	110	vai	545	*** 9		11200		550				Ī	555
Crea	T1.	375.1	Glv		Tvr	Glu	Glu	Tvr	-	Glv	Asn	Lvs	Pro	Phe
Cys	TIE	vai	GIY	560	- y -	014	024	-1-	565	0-1		2		570
73 1	-1 -	T	C 0.35		17-1	Glu	Gl v	Thr		Δla	Tvr	Asn	Asp	Gly
Pne	TTE	ьуѕ	261		vai	GIU	GLY	1111	580	mu	- 1 -			585
70	- 2.	7	O	575	7.~~	T1.	Lou	T.e.i		Va 1	Aan	Gl√	Ara	Ser
Arg	TTE	arg	cys	590	Asp	116	₩EU	∈u	595	vul		1	3	600
m'	a	~ 3	M +-		uic	λ] ~	Cvc	T.e.ii		Δνα	T,em	T,e11	Lvs	Glu
Thr	ser	GIY	met		пта	AId	Cys	neu	610	21.3	بير در	عات سد	-,5	615
_	_	~ 3		605	mb	T	TL	τl ~		C ~ ~	Tvr	Dro	Glv	
Leu	ьys	сту	arg			neu	TIIT	116	625	SET	111		~ - y	Thr 630
37. 1	_			620					023					555
Pue	Leu			•										

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Lys Val Leu Asn His Ser Pro Met Ser Asp Ala Ser Val Asn Phe
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                 20
Asp Tyr Lys Ser Pro Ser Pro Phe Asp Cys Ser Thr Asp Gln Glu
                                      40
Glu Lys Ile Glu Asp Val Ala Ser His Cys Leu Pro Gln Lys Asp
                                      55
Leu Tyr Thr Ala Glu Glu Glu Ala Ala Thr Leu Phe Pro Arg Lys
                                      70
Met Thr Ser His Asn Gly Met Glu Asp Ser Gly Gly Gly Thr
                                      85
                 80
Gly Val Lys Lys Lys Lys Lys Lys Glu Pro Gly Asp Gln Glu
                                     100
                 95
Gly Ala Ala Lys Gly Ser Lys Asp Arg Glu Pro Lys Pro Lys Arg
                                     115
                110
Lys Arg Glu Pro Lys Glu Pro Lys Glu Pro Arg Lys Ala Lys Glu
                                     130
                125
Pro Lys Lys Ala Lys Glu His Lys Glu Pro Lys Gln Lys Asp Gly
                                     145
                140
Ala Lys Lys Ala Arg Lys Pro Arg Glu Ala Ser Gly Thr Lys Glu
                                     160
Ala Lys Glu Lys Arg Ser Cys Thr Asp Ser Ala Ala Arg Thr Lys
                                     175
                 170
Ser Arg Lys Ala Ser Lys Glu Gln Gly Pro Thr Pro Val Glu Lys
                                     190
                 185
Lys Lys Lys Gly Lys Arg Lys Ser Glu Thr Thr Val Glu Ser Leu
                                     205
                 200
Glu Leu Asp Gln Gly Leu Thr Asn Pro Ser Leu Arg Ser Pro Glu
                                     220
                 215
Glu Ser Thr Glu Ser Thr Asp Ser Gln Lys Arg Arg Ser Gly Arg
                                     235
                 230
Gln Val Lys Arg Arg Lys Tyr Asn Glu Asp Leu Asp Phe Lys Val
                                     250
 Val Asp Asp Gly Glu Thr Ile Ala Val Leu Gly Ala Gly Arg
                                     265
 Thr Ser Ala Leu Ser Ala Ser Thr Leu Ala Trp Gln Ala Glu Glu
                 275
 Pro Pro Glu Asp Asp Ala Asn Ile Ile Glu Lys Ile Leu Ala Ser
                                     295
                 290
 Lys Thr Val Gln Glu Val His Pro Gly Glu Pro Pro Phe Asp Leu
                                      310
                 305
 Glu Leu Phe Tyr Val Lys Tyr Arg Asn Phe Ser Tyr Leu His Cys
                                      325
                 320
 Lys Trp Ala Thr Met Glu Glu Leu Glu Lys Asp Pro Arg Ile Ala
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340
                335
Gln Lys Ile Lys Arg Phe Arg Asn Lys Gln Ala Gln Met Lys His
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                350
Ile Phe Thr Glu Val Lys Gln Tyr Leu Leu Thr His Leu Thr Ala
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Ala Phe Leu Ala Ala Val Asn Thr Val Phe Thr Phe Leu Ser Pro
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Gly Thr Ser Thr Ser Thr Pro Ala Ala Pro Thr Ala Arg Lys Gln
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                                     40
His Cys Lys Ser Arg Lys Asn Asn Tyr Gly Leu Leu Asn Glu
Asn Glu Ser Leu Phe Leu Met Val Val Leu Trp Lys Ile Pro Ser
                                     70
Lys Glu Leu Arg Val Arg Leu Thr Leu Pro His Ser Ile Arg Ser
Asp Ser Glu Asp Ile Cys Leu Phe Thr Lys Asp Glu Pro Asn Ser
                                    100
Thr Pro Glu Lys Thr Glu Gln Phe Tyr Arg Lys Leu Leu Asn Lys
                110
                                    115
His Gly Ile Lys Thr Val Ser Gln Ile Ile Ser Leu Gln Thr Leu
                                    130
                125
Lys Lys Glu Tyr Lys Ser Tyr Glu Ala Lys Leu Arg Leu Leu Ser
                                    145
Ser Phe Asp Phe Phe Leu Thr Asp Ala Arg Ile Arg Arg Leu Leu
                                    160
                155
Pro Ser Leu Ile Gly Arg His Phe Tyr Gln Arg Lys Lys Val Pro
                170
                                    175
Val Ser Val Asn Leu Leu Ser Lys Asn Leu Ser Arg Glu Ile Asn
                185
                                    190
Asp Cys Ile Gly Gly Thr Val Leu Asn Ile Ser Lys Ser Gly Ser
                200
                                    205
Cys Ser Ala Ile Arg Ile Gly His Val Gly Met Gln Ile Glu His
Ile Ile Glu Asn Ile Val Ala Val Thr Lys Gly Leu Ser Glu Lys
                230
                                    235
Leu Pro Glu Lys Trp Glu Ser Val Lys Leu Phe Val Lys Thr
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                245
Glu Lys Ser Ala Ala Leu Pro Ile Phe Ser Ser Phe Val Ser Asn
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265

260

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Trp Asp Glu Ala Thr Lys Arg Ser Leu Leu Asn Lys Lys Lys
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                275
Glu Ala Arg Arg Lys Arg Arg Glu Arg Asn Phe Glu Lys Gln Lys
                                    295
                290
Glu Arg Lys Lys Lys Arg Gln Gln Ala Arg Lys Thr Ala Ser Val
                                    310
                305
Leu Ser Lys Asp Asp Val Ala Pro Glu Ser Gly Asp Thr Thr Val
                                    325
                320
Lys Lys Pro Glu Ser Lys Lys Glu Gln Thr Pro Glu His Gly Lys
                                    340
                335
Lys Lys Arg Gly Arg Gly Lys Ala Gln Val Lys Ala Thr Asn Glu
                                    355
                350
Ser Glu Asp Glu Ile Pro Gln Leu Val Pro Ile Gly Lys Lys Thr
                                    370
                365
Pro Ala Asn Glu Lys Val Glu Ile Gln Lys His Ala Thr Gly Lys
                                    385
                380
Lys Ser Pro Ala Lys Ser Pro Asn Pro Ser Thr Pro Arg Gly Lys
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Lys Arg Lys Ala Leu Pro Ala Ser Glu Thr Pro Lys Ala Ala Glu
                                    415
                410
Ser Glu Thr Pro Gly Lys Ser Pro Glu Lys Lys Pro Lys Ile Lys
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                425
Glu Glu Ala Val Lys Glu Lys Ser Pro Ser Leu Gly Lys Lys Asp
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                440
Ala Arg Gln Thr Pro Lys Lys Pro Glu Ala Lys Phe Phe Thr Thr
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Lys Leu Ser Ala Arg Ser Phe Ile Ser Arg His Ser Gln Gly Arg
                                     40
                 35
Arg Arg Glu Asp Ala Leu Ser Ser Glu Gly Cys Leu Trp Pro Ser
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Glu Ser Thr Val Ser Gly Asn Gly Ile Pro Glu Pro Gln Val Tyr
                                     70
                 65
Ala Pro Pro Arg Pro Thr Asp Arg Leu Ala Val Pro Pro Phe Ala
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Gln Arg Glu Arg Phe His Arg Phe Gln Pro Thr Tyr Pro Tyr Leu
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Gln His Glu Ile Asp Leu Pro Pro Thr Ile Ser Leu Ser Asp Gly
                110
                                    115
Glu Glu Pro Pro Pro Tyr Gln Gly Pro Cys Thr Leu Gln Leu Arg
                125
                                    130
Asp Pro Glu Gln Gln Leu Glu Leu Asn Arg Glu Ser Val Arg Ala
                                    145
Pro Pro Asn Arg Thr Ile Phe Asp Ser Asp Leu Met Asp Ser Ala
                                    160
Arg Leu Gly Gly Pro Cys Pro Pro Ser Ser Asn Ser Gly Ile Ser
                                    175
                170
Ala Thr Cys Tyr Gly Ser Gly Gly Arg Met Glu Gly Pro Pro
                                    190
                185
Thr Tyr Ser Glu Val Ile Gly His Tyr Pro Gly Ser Ser Phe Gln
                                    205
                200
His Gln Gln Ser Ser Gly Pro Pro Ser Leu Leu Glu Gly Thr Arg
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Leu His His Thr His Ile Ala Pro Leu Glu Ser Ala Ala Ile Trp
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                                    235
Ser Lys Glu Lys Asp Lys Gln Lys Gly His Pro Leu
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Asp Pro Arg Ser Gln Pro Ile Asn Leu Asn His Tyr Ala Thr Lys
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Lys Ser Val Ala Glu Ser Met Leu Asp Val Ala Leu Phe Met Ser
                                     40
                 35
Asn Ala Met Arg Leu Lys Ala Val Leu Glu Gln Gly Pro Ser Ser
                 50
                                     55
His Tyr Tyr Thr Thr Leu Val Thr Leu Ile Ser Leu Ser Leu Leu
                                     70
                 65
Leu Gln Val Val Ile Gly Val Leu Leu Val Val Ile Ala Arg Leu
                                     8.5
Asn Leu Asn Glu Val Glu Lys Gln Trp Arg Leu Asn Gln Leu Asn
                                     100
Asn Gly Ser His Ile Leu Val Phe Phe Thr Val Val Ile Asn Gly
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Phe Ile Thr Gly Phe Gly Ala His Lys Thr Arg Val Leu Ala Cys
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Gln Asp Ser Arg Asn Pro Leu

140

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                                     25
                20
Asn Ile Tyr Thr Tyr Val Asp Tyr Ile His Val Cys Ile Tyr Val
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Tyr Ile Tyr Ile His Leu Tyr Lys Cys Ile Tyr Thr Tyr Thr Tyr
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Asn Val Cys Met Cys Ile Tyr
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Cys Leu Ile Pro Ala Asp Arg Pro Trp Asp Arg Gly Gln His Trp
                                     25
Gln Leu Glu Met Ala Asp Thr Arg Ser Val His Glu Thr Arg Phe
                                     40
Glu Ala Ala Val Lys Val Ile Gln Ser Leu Pro Lys Asn Gly Ser
                                     55
                 50
Phe Gln Pro Thr Asn Glu Met Met Leu Lys Phe Tyr Ser Phe Tyr
                                     70
                 65
Lys Gln Ala Thr Glu Gly Pro Cys Lys Leu Ser Arg Pro Gly Phe
                 80
Trp Asp Pro Ile Gly Arg Tyr Lys Trp Asp Ala Trp Ser Ser Leu
                                    100
Gly Asp Met Thr Lys Glu Glu Ala Met Ile Ala Tyr Val Glu Glu
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Met Lys Lys Ile Ile Glu Thr Met Pro Met Thr Glu Lys Val Glu
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Glu Leu Leu Arg Val Ile Gly Pro Phe Tyr Glu Ile Val Glu Asp
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                                    145
Lys Lys Ser Gly Arg Ser Ser Asp Ile Thr Ser Asp Leu Gly Asn
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Val Leu Thr Ser Thr Pro Asn Ala Lys Thr Val Asn Gly Lys Ala
Glu Ser Ser Asp Ser Gly Ala Glu Ser Glu Glu Glu Glu Ala Gln
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Glu Glu Val Lys Gly Ala Glu Gln Ser Asp Asn Asp Ile Asn Asp
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Asp His Val Glu Asp Val Thr Gly Ile Gln His Leu Thr Ser Asp
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Ser Asp Ser Glu Val Tyr Cys Asp Ser Met Glu Gln Phe Gly Gln
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Glu Glu Ser Leu Asp Ser Phe Thr Ser Asn Asn Gly Pro Phe Gln
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Tyr Tyr Leu Gly Gly His Ser Ser Gln Pro Met Glu Asn Ser Gly
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Phe Arg Glu Asp Ile Gln Val Pro Pro Gly Asn Gly Asn Ile Gly
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Gly Gly Glu Asp Gly Arg Asn Asn Ser Gly Ala Pro His Arg Glu
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Gln Val Gly Ser Gly Gly Asp Gly Glu Arg Trp Gly Ser Asp Arg
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Leu Glu Thr Leu Thr Ala Leu Gln Ala Lys Ser Ser Thr Ser Thr
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Val Pro Arg Lys Arg Gly His Ile Ser Pro Lys Ser Arg Pro Met
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Pro Pro Ser Ala Lys Val Lys Lys Ile Phe Gly Trp Gly Asp Phe
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Lys Ile Val Asp His Gly Asn Gly Thr Phe Ser Val His Phe Gln
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His Asn Ala Thr Gly Gln Gly Asn Ile Ser Ile Ser Leu Val Pro
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Pro Ser Lys Ala Val Glu Phe His Gln Glu Gln Gln Ile Phe Ile
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Lys Val Glu Arg Gly Arg Arg Thr Ser Leu Cys Thr His Asp Pro
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Ala Lys Ile Cys Ser Arg Asp His Ala Gln Ser Ser Ala Thr Trp
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Ser Cys Ser Gln Pro Phe Lys Val Val Cys Val Tyr Ile Ala Phe
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Lys Lys Thr Ser Ala Lys Ala Asp Pro Ala Leu Leu Asn Asn His
Ser Asn Leu Lys Pro Ala Pro Thr Val Pro Ser Ser Pro Asp Ala
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Thr Pro Glu Pro Lys Gly Pro Gly Asp Gly Ala Glu Glu Asp Glu
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Ala Ala Ser Gly Gly Pro Gly Gly Arg Gly Pro Trp Ser Cys Glu
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Glu Gly Pro Pro Val Leu Cys Pro Arg Arg Pro Trp Pro Ser Leu
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Cys Trp Lys Ile Ser Leu Ser Ser Gly Thr Leu Leu Leu Leu
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Glu Gly Ile Gly Glu Gly Glu Phe Leu Val Leu Asp Gln Arg Ala
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Ala Asp Tyr Asn Gln Ala Leu Gly Thr Cys Arg Leu Ala Gly Thr
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Ala Leu Cys Val Ala Ala Gly Val Leu Leu Ala Ile Cys Leu Phe
Trp Ala Met Ile Gly Trp Leu Ser Gln Asp Thr Lys Ala Glu Pro
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Leu Asp Pro Glu Ala Asp Ser His Val Glu Val Phe Gly Asp Glu
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Pro Glu Gln Gln Leu Ser Pro Ile Phe Arg Asn Ala Ser Gly Gln
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Asn Ile Val Val Val Pro Glu Ala Ile Gly Ser Leu Val Lys Leu
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Leu Gln Thr Leu Asp Ile Ser Thr Asn Arg Leu Leu Thr Leu Pro
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Glu Arg Leu His Met Cys Leu Ser Leu Gln Tyr Leu Thr Val Asp
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Arg Asn Arg Leu Trp Tyr Val Pro Arg His Leu Cys Gln Leu Pro
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Ser Leu Asn Glu Leu Ser Met Ala Gly Asn Arg Leu Ala Phe Leu
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Pro Leu Asp Leu Gly Arg Ser Arg Glu Leu Gln Tyr Val Tyr Val
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Asp Asn Asn Ile His Leu Lys Gly Leu Pro Ser Tyr Leu Tyr Asn
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Glu Val Lys Leu Leu Ser Phe Ser Ser Gly Gln Arg Thr Val Phe
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Leu Pro Ala Glu Val Lys Ala Ile Gly Thr Glu His Asp His Val
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Leu Pro Leu Gln Glu Leu Ala Met Arg Gly Leu Tyr His Thr Tyr
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His Ser Leu Leu Lys Asp Leu Asn Phe Leu Ser Pro Ile Ser Leu
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Pro Arg Ser Leu Leu Glu Leu Leu His Cys Pro Leu Gly His Cys
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His Arg Cys Ser Glu Pro Met Phe Thr Ile Val Tyr Pro Lys Leu
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Phe Pro Leu Arg Glu Thr Pro Met Ala Gly Leu His Gln Trp Lys
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Leu Tyr Thr Gly Thr Val Ser Ser Phe Gln Gly Asn Asp Pro Ala
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Ile Ser Arg Ser Gln Ser Leu Arg Pro Thr Lys Thr Glu Ser Ser
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Leu Asn Trp Leu Gln Asp Pro Ala Phe Val Ala Ser Ala Tyr Ile
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Phe Phe Phe Ser Glu Thr Gly Gln Glu Phe Glu Phe Glu Asn
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Thr Ile Val Ser Arg Ile Ala Arg Ile Cys Lys Gly Asp Glu Gly
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Gly Glu Arg Val Leu Gln Gln Arg Trp Thr Ser Phe Leu Lys Ala
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Gln Leu Leu Cys Ser Arg Pro Asp Asp Gly Phe Pro Phe Asn Val
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Leu Gln Asp Val Phe Thr Leu Ser Pro Ser Pro Gln Asp Trp Arg
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Asp Thr Leu Phe Tyr Gly Val Phe Thr Ser Gln Trp His Arg Gly
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Thr Thr Glu Gly Ser Ala Val Cys Val Phe Thr Met Lys Asp Val
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Gln Arg Val Phe Ser Gly Leu Tyr Lys Glu Val Asn Arg Glu Thr
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Gln Gln Trp Tyr Thr Val Thr His Pro Val Pro Thr Pro Arg Pro
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Gly Ala Cys Ile Thr Asn Ser Ala Arg Glu Arg Lys Ile Asn Ser
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Ser Leu Gln Leu Pro Asp Arg Val Leu Asn Phe Leu Lys Asp His
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Phe Leu Met Asp Gly Gln Val Arg Ser Arg Met Leu Leu Leu Gln
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Pro Gln Ala Arg Tyr Gln Arg Val Ala Val His Arg Val Pro Gly
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Leu His His Thr Tyr Asp Val Leu Phe Leu Gly Thr Gly Asp Gly
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Leu Leu Asp Thr His Arg Gly Leu Leu Tyr Ala Ala Ser His Ser
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Gly Val Val Gln Val Pro Met Ala Asn Cys Ser Leu Tyr Arg Ser
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Cys Gly Asp Cys Leu Leu Ala Arg Asp Pro Tyr Cys Ala Trp Ser
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Gly Ser Ser Cys Lys His Val Ser Leu Tyr Gln Pro Gln Leu Ala
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Thr Arg Pro Trp Ile Gln Asp Ile Glu Gly Ala Ser Ala Lys Asp
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Leu Cys Ser Ala Ser Ser Val Val Ser Pro Ser Phe Val Pro Thr
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Asn Thr Leu Ala Cys Pro Leu Leu Ser Asn Leu Ala Thr Arg Leu
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Trp Leu Arg Asn Gly Ala Pro Val Asn Ala Ser Ala Ser Cys His
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Val Leu Pro Thr Gly Asp Leu Leu Leu Val Gly Thr Gln Gln Leu
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Gly Glu Phe Gln Cys Trp Ser Leu Glu Glu Gly Phe Gln Gln Leu
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Val Ala Ser Tyr Cys Pro Glu Val Val Glu Asp Gly Val Ala Asp
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Asn Ser Met Lys Val Phe Leu Lys Gln Gly Glu Cys Ala Ser Val
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His Pro Lys Thr Cys Pro Val Val Leu Pro Pro Glu Thr Arg Pro
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Leu Asn Gly Leu Gly Pro Pro Ser Thr Pro Leu Asp His Arg Gly
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Glu Ser Glu Lys Arg Pro Leu Ser Ile Gln Asp Ser Phe Val Glu
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Glu Gly Ser Lys Cys Ser Ile Leu Ser Lys His Gln Gln Phe Val
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Glu His Cys Cys Met Arg Cys Cys Ser Pro Phe Thr Phe Leu Val
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Asn Thr Lys Arg Gln Cys Gly Asp Cys Lys Phe Asn Val Cys Lys
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Ser Cys Cys Ser Tyr Gln Lys His Glu Lys Ala Trp Val Cys Cys
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Val Cys Gln Gln Ala Arg Leu Leu Arg Ala Gln Ser Leu Glu Trp
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Lys Arg Lys Tyr Leu Val Pro Ser Asp Leu Thr Val Gly Gln Phe
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Cys	Lys	Lys	Val	Cys	Gly	His	Tyr	Thr	Gln	Val	Val	Trp	Ala	Asp
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Cys	Val	Asn	Asp	Ser	Glu	Thr	Lys	Ser	Asn	Val	Thr	Thr	Met	Leu
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Tyr	Ile	Arg	Leu	Ala	His	Ile	Ser	Thr						
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